

REMARKS

Although unnecessary, the specification has been amended to cross-reference to the counterpart PCT application as requested by the Examiner. See MPEP §1893.03(c) at 1800-200 (August 3, 2005). "...It is not necessary for the Applicant to amend the first sentence >(s)< of the specification to reference the International Application No....). This is because the filing date of a National Stage application is its PCT filing date.

Applicants respectfully dispute that the Declaration filed December 13, 2004 is defective. The Declaration clearly identifies the application as PCT/JP03/07592 filed June 16, 2003 (pg. 1, right-hand corner).

In response to the rejection under 35 U.S.C. § 112, second paragraph, claim 1 has been amended to clarify that n atoms/groups of Y¹ may be the same or different and that m atoms/groups of Y² may be the same or different.

Withdrawal is respectfully requested.

New claim 18 finds support, for example, at page 8, lines 15-22 of the specification.
New claim 19 finds support, for example, at page 7, lines 18 and 22 of the specification.

Review and reconsideration on the merits are requested.

Claims 1-17 were rejected under 35 U.S.C. § 103(a) as being unpatentable over U.S. Patent No. 6,649,790 to Tatemoto.

Applicants traverse, and respectfully request the Examiner to reconsider for the following reasons.

In the process of Tatemoto, the thermal decomposition reaction is conducted in the presence of a catalyst which coordinates to a metal ion M. The invention of Tatemoto can promote this reaction, make efficient use of raw materials and inhibit generation of by-products by using the catalyst. Further, in the description of Tatemoto, the following is disclosed: "When the starting compound is dispersed or dissolved in a solvent, the solvent used may be the above-mentioned catalyst itself or an inert liquid (paragraph 4, lines 1 to 3)". However, specific use of the catalyst as a solvent is not disclosed in the Example.

On the other hand, the present invention constitutes an advance in the art by further reducing generation of by-products. For achieving the purpose, the solvent and reaction temperature are controlled. The method of this invention is conducted in the presence of a coordinating organic solvent. By using the coordinating organic solvent, the present invention can produce the intended compound in good yield and inhibit the generation of by-products.

Further, in the present invention, thermal decomposition is conducted at a temperature of not lower than 50°C but lower than 170°C. Namely, when the reaction is carried out at temperatures not lower than 170°C, by-products tend to form in large amount. Thus, one advantage of the invention is to inhibit the generation of by-products while also conducting the reaction at the temperature within the range mentioned above. On the other hand, in claim 1 of Tatemoto, the reaction temperature is not limited.

Consequently, this invention provides a specific effect by use of a coordinating organic compound as a solvent and setting the reaction temperature within a specified range.

That is, by use of a coordinating organic compound as a solvent and specifying the reaction temperature within a certain range, Applicants have established a method of further inhibiting the generation of by-products, and there is nothing in the prior art which suggests the criticality of these parameters. For example, as shown in Comparative Example 1 bridging pages 14-15 of the specification, refluxing at 203°C outside the scope of claim 1 provided a product having a water-soluble fluorine-containing vinyl ether:by-product ratio of 100:102. On the other hand, Example 1 where the inside temperature was slowly raised to 140°C provided a ratio of 100:9; Example 2 where the contents were heated to 145°C provided a ratio of 100:9; and Example 3 where the contents were heated to 140°C provided a ratio of main product:by-products of 100:11.

In summary, Applicants have established criticality in the claimed method for significantly inhibiting generation of by-products, by subjecting the derivative represented by formula (I) to thermal decomposition (i) at a temperature of not lower than 50°C but lower than 170°C, and (ii) in the presence of a coordinating organic solvent to yield the desired product, not taught by the prior art.

Claims 2-17 depending primarily or secondarily from claim 1 are patentable for the same reasons that claim 1 is patentable over the prior art.

Withdrawal of all rejections and allowance of claims 1-17 is earnestly solicited.

In the event that the Examiner believes that it may be helpful to advance the prosecution of this application, the Examiner is invited to contact the undersigned at the local Washington, D.C. telephone number indicated below.

AMENDMENT UNDER 37 C.F.R. § 1.111
U.S. Application No. 10/517,667

Q84706

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Respectfully submitted,



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